## AMENDMENTS TO THE CLAIMS

1. **(Amended)** A method of detecting binding between a putative ligand and a selectively labeled target molecule, wherein the target molecule comprises a plurality of amino acid moieties including at least one tryptophan moiety, and wherein at least the tryptophan moiety is selectively labeled, which method comprises: a) generating a first NMR spectrum of said target molecule; b) forming a mixture of said target molecule with at least one putative ligand; c) generating a second NMR spectrum of the mixture of step (b); and d) comparing the first and second spectra.

2. **(Amended)** The method of claim 1, wherein the tryptophan moiety is labeled with a ~~nuclei~~ nucleus selected from the group consisting of $^{1}H$, $^{13}C$, $^{15}N$, and $^{19}F$.

3. **(Original)** The method of claim 1, wherein the selectively labeled target molecule is selected from the group consisting of lipoproteins, lipoprotein fragments, glycoproteins, glycoprotein fragments, proteins, protein fragments, and polypeptides.

4. **(Original)** The method of claim 3, wherein the selectively labeled target molecule is selected from the group consisting of proteins, protein fragments, and polypeptides.

5 - 9 **(Cancelled)**

10. **(New)** The method of claim 1, wherein the entire backbone of the target molecule is not labeled.

11. **(New)** The method of claim 1, wherein the tryptophan moiety is labeled with $^{1}H$.

12. **(New)** The method of claim 1, wherein the tryptophan moiety is labeled with $^{13}C$.

13. **(New)** The method of claim 1, wherein the tryptophan moiety is labeled with $^{15}N$.

14. **(New)** The method of claim 1, wherein the tryptophan moiety is labeled with $^{19}F$.

15. **(New)** The method of claim 1, wherein the target molecule comprises a selectively labeled amino acid moiety that is at a functional site of the target molecule.

16. **(New)** The method of claim 15, wherein the selectively labeled amino acid is tryptophan.

17. **(New)** A method of detecting binding between a putative ligand and a selectively labeled target molecule, wherein the target molecule comprises a plurality of amino acid moieties including at least one tryptophan moiety, and wherein at least the side chain of at least the tryptophan moiety is labeled, which method comprises: a) generating a first NMR spectrum of said target molecule; b) forming a mixture of said target molecule with at least one putative ligand; c) generating a second NMR spectrum of the mixture of step (b); and d) comparing the first and second spectra.

18. **(New)** The method of claim 17, wherein the tryptophan moiety is labeled with $^{1}H$.

19. **(New)** The method of claim 17, wherein the tryptophan moiety is labeled with $^{13}C$.

20. **(New)** The method of claim 17, wherein the tryptophan moiety is labeled with $^{15}N$.

21. **(New)** The method of claim 17, wherein the tryptophan moiety is labeled with $^{19}F$.

22. **(New)** The method of claim 17, wherein the selectively labeled target molecule is selected from the group consisting of lipoproteins, lipoprotein fragments, glycoproteins, glycoprotein fragments, proteins, protein fragments, and polypeptides.

23. **(New)** The method of claim 22, wherein the selectively labeled target molecule is selected from the group consisting of proteins, protein fragments, and polypeptides.

24. **(New)** The method of claim 17, wherein the target molecule comprises a selectively labeled amino acid moiety that is at a functional site of the target molecule.

25. **(New)** The method of claim 24, wherein the selectively labeled amino acid is tryptophan.